IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Vincent P. Stanton, Jr. Art Unit : 1634
Serial No. : 09/638,267 Examiner : A. Chakrabarti
Filed : August 14, 2000
Title : GENE SEQUENCE VARIANCES IN GENES RELATED TO FOLATE METABOLISM HAVING UTILITY IN DETERMINING THE TREATMENT OF DISEASE



**BOX AF**
Commissioner for Patents
Washington, D.C. 20231

O.K. to enter Arun Kr. Chakrabarti 5/16/03

RESPONSE

In response to the action mailed July 8, 2002, please amend the application as follows:

In the claims:

Please amend claims 122 and 123 as follows:

122. (Amended) A method for selecting a treatment for a patient suffering from a condition or disease, comprising:

determining whether cells of the patient contain at least one variance in the methylenetetrahydrofolate reductase gene, wherein the presence or the absence of the variance in the gene is indicative of the effectiveness of said treatment for the condition or disease,

wherein the variance is selected from the group consisting of:

(a) a variance that causes a G to be present at nucleotide 464 of the mRNA (SEQ ID NO:1) encoded by the methylenetetrahydrofolate reductase gene;

(b) a variance that causes a U to be present at nucleotide 519 of the mRNA (SEQ ID NO:1) encoded by the methylenetetrahydrofolate reductase gene;

(c) a variance that causes a C to be present at nucleotide 1059 of the mRNA (SEQ ID NO:1) encoded by the methylenetetrahydrofolate reductase gene;

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, Washington, D.C. 20231.

January 8, 2003
Date of Deposit

Carrie A. Amonte
Signature

Carrie A Amonte
Typed or Printed Name of Person Signing Certificate

(d) a variance that causes an A to be present at nucleotide 1784 of the mRNA (SEQ ID NO:1) encoded by the methylenetetrahydrofolate reductase gene.

2 123. (Amended) A method for selecting a treatment for a patient suffering from a condition or disease, comprising:

determining whether cells of the patient contain at least two variances in the methylenetetrahydrofolate reductase gene, wherein the presence or the absence of the variance in the gene is indicative of the effectiveness of said treatment for the condition or disease,

wherein the two variances are selected from the group consisting of:

(a) a variance that causes a G to be present at nucleotide 464 of the mRNA (SEQ ID NO:1) encoded by the methylenetetrahydrofolate reductase gene;

(b) a variance that causes a U to be present at nucleotide 519 of the mRNA (SEQ ID NO:1) encoded by the methylenetetrahydrofolate reductase gene;

(c) a variance that causes a C to be present at nucleotide 1059 of the mRNA (SEQ ID NO:1) encoded by the methylenetetrahydrofolate reductase gene;

(d) a variance that causes an A to be present at nucleotide 1784 of the mRNA (SEQ ID NO:1) encoded by the methylenetetrahydrofolate reductase gene; and

(e) a variance that causes an C to be present at nucleotide 120 of the mRNA (SEQ ID NO:1) encoded by the methylenetetrahydrofolate reductase gene.

In the abstract:

Please replace the abstract with the following new abstract.

-- Methods for selecting a treatment for a patient suffering from a condition or disease that entail determining whether cells of the patient contain certain variances in selected genes, e.g., the methylenetetrahydrofolate reductase gene, are described.--